

REMARKS

Overview of Claim Amendments

New claim 171 is based on claim 146 as finally rejected, but adds the limitation, ", wherein the templated molecule is not a polynucleotide".

An embodiment in which the templated molecule is a polynucleotide is taught at page 31, line 33. According to MPEP 2173.05(i), if alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. See In re Johnson, 194 USPQ 187, 196 (CCPA 1977). Hence, claim 171 may disclaim the polynucleotide embodiment.

Basis for new claims 172 and 173 is found at page 32, lines 1-2 and 5, respectively.

New claim 174 is dependent on claim 30 and recites that the chemical connection of the further functional entity to the first functional entity referred to in steps (c) and (e) is covalent. It is evident from the discussion of reactive groups at pages 30-31 that it was contemplated that the chemical convection could be covalent. See also the discussion of "cross-linking efficiency" at pages 62-64, and the clearly covalent reactions schematized on pages 64 and 66.

Obviousness

Hogan does not teach or motivate a bifunctional complex according to amended claim 146 (disclaiming "polynucleotides") as obtainable by the method of claim 30 (optionally amended per claim 174 to cite "covalent chemical connection").

Hogan is directed to the provision of hybridisation probes with "arms" having the ability to selectively hybridise to each other -i.e. hybridisation takes place only in the presence of a "target nucleic acid". The detection of the presence of a "target nucleic acid" - or the absence of the same as the case may be - is not relevant for the present invention as we absolutely require that a "target nucleic

acid" in the form of a template must be present. In principle, it is not important for the execution of the present invention whether the zipping oligonucleotides hybridise perfectly, or whether there is one or more gaps in the hybridised region.

The important issue is, that some form of hybridisation, but not necessarily perfect hybridisation without any gaps, must take place in order to bring the functional entities into reactive contact. The language adopted for claim 146 cites "...at least two zipping oligonucleotides capable of reversibly dimerizing in an ordered way...."

The "ordered way" reads on the propensity of a specific nucleobase to preferentially form hydrogen bonds with one or a specified sub-set of different nucleobases. This does not rule out imperfect hybridisation between complementary zipping oligonucleotides.

Original claim 20 as published in the international phase cites the functional limitation that the annealing temperature of codons:anti-codons should be higher than the annealing temperature of the zipping oligonucleotides. This functional limitation also does not preclude imperfect hybridisation between zipping oligonucleotides.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.  
Attorneys for Applicant

By: 

Iver P. Cooper  
Reg. No. 28,005

624 Ninth Street, N.W.  
Washington, D.C. 20001  
Telephone: (202) 628-5197  
Facsimile: (202) 737-3528  
IPC:lms  
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